DETERMINATION OF THE EXTENT AND SOURCE OF LEAD CONTAMINATION IN WOODCOCK (*Scolopax minor*) FROM WISCONSIN

FINAL REPORT

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ABSTRACT

An initial survey to determine levels of lead in American woodcock (*Scolopax minor*) from Wisconsin was conducted in 1998 using wing bones from hunter-donated woodcock. The results of this initial survey indicated that both young-of-year and adult woodcock are accumulating extremely high levels of lead in their bones. Similar collections were made (using steel shot) between 1999-2001. The combined results of this collection indicated that 43.4% young of year (range 1.5-220.0 μg/g dry wt) and 52.7% adult birds (range 5.1-171.0 μg/g dry wt) had bone lead levels in the elevated range (>20 μg/g dry wt). Lead was detected in the liver tissue of all birds sampled but not at a range that would be considered elevated. Blood samples were collected from adults and chicks at a site considered elevated based on bone lead results (Mead Wildlife Area) and a site considered background (Navarino Wildlife Area). These samples were analyzed for lead concentration and aminolevulinic acid dehydratase (ALAD) activity. The mean blood lead concentrations of both adult and woodcock chicks from both sites did not reach a level that is considered to be elevated in waterfowl (>0.200 μg/ml). However, blood lead concentrations of chicks from the Mead Wildlife Area were significantly higher than lead levels in chicks from Navarino Wildlife Area ($p = 0.002$). Results of ALAD analysis indicate probable lead exposure in several adult woodcock. Stable isotope analysis was conducted on a sub-set of bone samples from young of year birds in order to identify the source of the lead. The results were inconclusive but did not rule out anthropogenic sources of lead.